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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,734	08/23/2005	Johannes Wilhelmus Belt	121640-05007521	6880

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EXAMINER

WOODWARD, ANA LUCRECIA

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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04/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,734	Applicant(s) BELT ET AL.	
	Examiner Ana L. Woodward	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6,8,9,11-13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,9,11-13,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said v subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9, 11-13 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 5,621,040 (Akkapeddi et al).

Akkapeddi et al disclose blends comprising a thermoplastic polyester, an amine functionalized elastomer and a graft coupling agent. The reference discloses hydrogenated amine functionalized butadiene/acrylonitrile copolymers (reading on the presently claimed hydrogenated copolymer mixed with an amine group containing compound) as examples of “most preferred” amine functionalized elastomers (column 4, lines 45-59). Suitable graft coupling agents include blocked isocyanate-based compounds and multifunctional epoxides (reading on the presently claimed compound of formula (I) - see (column 6, lines 25-43, etc.).

Example 5 is noted of particular interest in the use of an isocyanate compound as the graft coupling agent. Said example differs from the present claims only in the amine-functionalized elastomer used. It is maintained that the use of a hydrogenated amine

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functionalized butadiene/acrylonitrile copolymer is immediately envisaged to one having ordinary skill in the art from the reference's specific disclosure of "most preferred" embodiments. Accordingly, the disclosure of the reference meets the requirements of the present claims in terms of the types of materials added. The onus is shifted to applicants to establish that the product of the present product-by-process claims is not the same as or obvious from that set forth by the reference.

The production of articles meeting the requirements of present claims 12 and 13 is deemed to be necessarily met by the reference's disclosure per column 8, lines 7-27.

Claim Rejections - 35 USC § 103

4. Claims 1, 6, 8, 9, 11-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,756,451 (Belt et al) in combination with U.S. 6,756,451 (Belt et al).

Belt et al disclose a process for the preparation of a hydrogenated butadiene/acrylonitrile copolymer comprising A) hydrogenating the copolymer in latex in the presence of hydrazine, an oxidizing agent and a catalyst, B) separating the hydrogenated copolymer from the latex and C) adding an amine compound to the hydrogenated copolymer. The copolymers have automotive applications.

Belt et al does not expressly disclose mixing with a compound that is capable of reacting with an amine. The secondary reference teaches that amino-functionalized hydrogenated butadiene/acrylonitrile copolymers are useful in reactions with various materials, e.g., isocyanate and epoxy-based materials.. Accordingly, it would have been obvious to one having ordinary skill in the art to have further reacted the amine-modified hydrogenated copolymers of Belt et al

with materials similar to those disclosed by the secondary reference with the reasonable expectation of success.

Response to Arguments

5. Applicant's arguments filed December 23, 2008 have been fully considered and are persuasive. The previous rejection has been withdrawn.

Allowable Subject Matter

6. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art neither anticipates nor renders obvious reacting a hydrogenated amine-functionalized acrylonitrile-butadiene copolymer with the specifically recited anhydrides.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ana L. Woodward/
Primary Examiner
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